Claims: I claim:

1. A method of increasing image processing performance by copying image data between a memory and an I/O RAM.
2. The method of claim 1 wherein said memory is cached.
3. The method of claim 1 wherein said memory is cached in a CPU cache.
4. The method of claim 1 wherein said memory is cached in an external cache.
5. The method of claim 1 wherein said copying in accomplished by DMA circuitry.
6. The method of claim 1 wherein said copying in accomplished by calling a memory copy function.
7. The method of claim 6 wherein said image data is copied in a single call to said memory copy function.
8. The method of claim 6 wherein a subset of said image data is copied one line at a time by repeated calls to said memory copy function.
9. The method of claim 6 wherein a subset of said image data is copied by repeated calls to said memory copy function.
10. The method of claim 1 wherein an image from said I/O RAM is copied to a buffer in said memory.
11. The method of claim 10 wherein said I/O RAM is associated with a video digitizer.
12. The method of claim 1 wherein a buffer in said memory is copied to an image in said I/O RAM.
13. The method of claim 12 wherein said I/O RAM is associated with a video output device.
14. The method of claim 13 wherein said video output device drives a computer monitor.
15. The method of claim 13 wherein said video output device outputs video signals.
16. A machine for image processing comprising:
    (a) a memory for storing an image;

(b) a processor for processing said image;

(c) an I/O device; and

(d) a means for copying image data between said memory and said I/O device, whereby image processing time is reduced.

17. The machine of claim 16 wherein said I/O device is a means for inputting an image.

18. The machine of claim 16 wherein said I/O device is a means for outputting an image.

19. The machine of claim 16 where said processor executes programs to enhance, compress, encrypt, or reformat said image data.

20. The machine of claim 16 where said processor executes programs to decrypt, decompress, or enhance said image data.

21. A network of machines comprising:

(a) one or more first machines which implement(s) the method of claim 10; and

(b) one or more second machines which implement(s) the method of claim 12, whereby a video signal is digitized and encoded by at least one of said first machines, transmitted across said network to other of said second machines that decode and output the results.

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FASTER IMAGE PROCESSING

Abstract: Methods and machines which increase image processing performance by efficiently copying image data from input memory to main memory before performing CPU intensive operations, such as image enhancement, compression, or encryption, and by efficiently copying image data from main memory to output memory after performing CPU intensive operations, such as decryption, decompression, image enhancement, or reformatting.